

# VIRGINIA WILDLIFE

NOVEMBER 1989

ONE DOLLAR



I took a trip up north recently to help out the New Hampshire Fish and Game Department with a video production. I had two friends from Boston with me, both women with solid television newsroom experience and an innocent love for wildlife that understandably included a distrust of hunters and fishermen. They weren't convinced by the conventional song and dance we sportsmen and women give about how much we care about the environment. Not that they won't admit there might be a few exceptions to the rule, but they believed that the majority of those involved in the shooting sports probably had criminal records.

Now, you've got to understand, Liz and Willa come from the erudite world of urban Boston. They'd seen most everything there was to be seen, covered every subject that could be covered in the state of Massachusetts, read most everything that should be read, and been most everywhere.

As a result, Liz and Willa had become wise to people. Animals were to be trusted, and people questioned. Their experiences with all things worldly had taught them that *everyone* had something to hide, and that most people took great delight in fooling the media and getting away with it.

So, here we were, three women on a video shoot in the wilds of New Hampshire, interviewing two wildlife law enforcement officers about their role in the protection of—*loons*. And here were these guys in their green uniforms and baseball caps, with revolvers strapped to their hips and a johnboat hitched to their muddy truck, looking more like cowboys than civilized protectors of our environment. Here they were talking about chasing some drunken rednecks hauling off an illegally killed bear in one breath, and in the next about birdwatching in their free time on Squam Lake.

Something inside Liz and Willa broke. Three hours later, they sat there discussing how they were going to do a 30-minute documentary on game wardens. They were charmed. I had to restrain them from asking the guys home for dinner. Never before had they met people who put their lives on the line for wildlife and loved doing it. Never before had they met people who weren't bitter or cynical about what they had seen in the line of duty, or hardened to simply “doing their jobs” for the paycheck. Chuck Kenney and Bill Phinney didn't show off because they didn't know how to. They were simply in love with life, and they showed it.

I had to smile. I realized that it didn't do any good telling Liz and Willa how dedicated folks in the wildlife profession are. I wasted my breath going on about how most hunters and fishermen don't give a rip about what anybody thinks or says about them, 'cause they figure that their actions will speak for them. Instead, I saw all those preconceived ideas about fish and game agencies working with bloodthirsty hunters to guarantee there will always be enough wildlife in the world to kill dissolve in one meeting with some disarming guys sporting fish and game patches on their sleeves, showing them what they lived for.

Later that week, I saw that same look of understanding reappear when we interviewed a fish biologist on the New Hampshire coast. Again, the man was innocently truthful, not at all alarmed by questions that might make others squirm. Patiently, he explained difficult biological concepts more than once, and only referred to the unmentionable hours he spent in the field when it was pulled out of him.

I'm not sure that animals are the only beings Liz and Willa trust these days.—Virginia Shepherd



White-tailed deer (*Odocoileus virginianus*); photo by William S. Lea.

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In much of life, the difference between average and excellent is surprisingly small. Take baseball for example. The difference between the major leaguer who bats .300 and his bench-riding teammate who struggles to hit .250 is a mere one hit per week! That difference, however small, makes one player an all-star and the other a minor leaguer.

It's the same in deer hunting. Some hunters I know tag bucks every season. Others, however, seem to suffer chronic "bad luck." They tell me they see few deer from their stands. Only rarely do they spot a buck. And most of the deer they do see are either out of range or running away, having already seen, heard or scented the hunter.

Like their successful colleagues, these frustrated sportsmen are stand hunters. They realize hunting from a tree stand or ground blind is the best way to tag a buck. But their stands never seem to pay off.

Why? Most likely because they're ignoring critical details of effective stand placement and stand use. To the casual observer, most deer stand locations may look about the same. They're placed in prime deer habitat. They're near game trails and they include varying degrees of camouflage and cover. These basics, however, are never enough. The hunter who hopes to consistently tag bucks must operate on a higher level. He must understand the four keys to successful deer stand hunting: proper selection of stand location, precise stand placement, effective stand approach, and avoiding overuse of stands.

**Selection of Stand Location.** A buck's daily routine begins when he rises from his bedding area an hour or so before sunset. He travels cautiously toward his prime feeding area, reaching it about the time shooting light fades into darkness. He'll feed actively for a few hours before bedding down around midnight. He's up again an hour or two before daylight to resume feeding. By dawn he's worked his way back to his daytime bedding area, reaching it soon after sunrise.

# Take A Stand

Taking a stand can be deer hunting at its best—or worst. If your stands aren't producing, it's time to rethink your strategy.

by Thomas L. Torget

Opposite: photo by Rob Simpson.

Obviously, the hunter wants his stand located along the primary travel route connecting the feeding area and daytime bedding area. But all points along that route are not equally promising for the hunter. Setting a stand at the edge of prime feeding areas, such as crop fields, often results in shooting opportunities under very poor lighting conditions. At dusk, a buck will often remain in thick cover near the edge of a crop field until virtually all daylight has faded from the sky. Similarly, by sunrise he's usually returned to the vicinity of his bedding area.

The other extreme, placing a stand immediately adjacent to daytime bedding areas, is also a poor choice. The

hunter approaching or leaving such a stand always risks spooking the buck from his bed.

The best stand location is about midway between a buck's bedding and feeding areas. Some hunters prefer stands closer to bedding areas because this can afford shots in better light. While true, this strategy is risky because it can spook bedded bucks—something successful hunters work hard to avoid.

When scouting, make sure the game trails you select for stand locations are active trails. Some years ago I located what I thought was an ideal location to ambush a big buck. Three heavily used game trails intersected just 15 yards from a thick pile of brush and toppled trees. Opening morning of bow season found me nestled in a ground blind I'd fashioned in the middle of the brush pile.

Two days of hunting from that blind resulted in only a handful of distant deer sightings and no encounters with a buck. The tracks along those game trails, I realized too late, were several weeks old. Lack of rain had preserved them and I'd failed to examine them closely. So don't waste time hunting last month's travel corridors. Concentrate on game trails with fresh tracks and fresh droppings.

**Precise Stand Placement.** Locating a stand in a primary travel corridor that's being actively used assures the hunter of only one thing: he will see deer. Getting a good shot—particularly for the bowhunter—requires careful attention to many stand placement details.

A common mistake is locating stands too close to game trails. One fall I found a "perfect" location for a ground blind. A major game trail connecting feeding and bedding areas passed by just five yards away. This will be duck soup, I promised myself as I set up camo netting in preparation for the next morning's hunt.

Sure enough, in the first 30 minutes of daylight I was visited by three does and a handsome six-point buck. Unfortunately for me, the surrounding thick

cover and my lack of elevation combined to prevent me from seeing the deer until they were only eight feet away. When a whitetail is that close, I quickly learned, the hunter is severely disadvantaged. No movement is possible. All I could do was crouch like a statue behind the camo netting while they tiptoed past me. By the time they were far enough away to allow me to move, heavy cover prevented any shot.

For the bowhunter, the ideal stand is 15-20 yards downwind from the primary game trail. That's close enough for accurate shooting but far enough to avoid being seen while drawing and aiming. Avoid the temptation of placing your tree stand on a limb that hangs directly over a game trail. A deer approaching a bowhunter head on, walking directly away, provides no shot at all. And shooting straight down as the deer passes beneath your stand is almost always unwise. The target area is very small and few bowhunters practice the shot. Tree stands located to the side of game trails are always the best choice.

Finishing touches are what make your stand goof-proof. Always position your tree stand to provide sufficient height and plenty of background cover. A well-camouflaged hunter who remains motionless will almost never spook a deer, even one that glances directly at him. For archers, 12 feet is a minimum height for productive tree stands, with 16-18 feet being ideal. While gun hunters can move even higher, archers often encounter troublesome shooting angles at heights above 20 feet.

*Take advantage of the sun.* Most shooting opportunities occur in the first or last minutes of daylight. Positioning your stand with the sun at your back provides two advantages. First, the deer are easier for *you* to see. Second, a buck's ability to spot you—particularly when the sun is low—is severely reduced.

Insufficient attention to wind direction probably accounts for more "stand failure" than any other single factor. A deer's nose is a remarkable detection tool. It's his first line of defense—far more so than his eyes or ears. Savvy hunters know this and



work hard to minimize their human odor. They also make effective use of cover scents. But even the best deer nose can't detect *downwind* human scent, so that's where your stand needs to be.

**Effective Stand Approach.** A wise buck knows trouble lurks everywhere. He takes nothing for granted. He is the essence of skittishness. His chronic tension is, in fact, the key to his survival.

**Make sure that you approach your stand with caution, since the most perfect stands can be ruined by a sloppy approach that will spook deer. Opposite: photo by Lloyd B. Hill.**

And while a buck studies his terrain all day every day, the typical hunter comes along just a few weekends each fall. Imagine for a moment an animal sneaking into your house for a few days this November. He doesn't know his way around very well, particularly in the dark. He tries to slip from room to room without detection. Can he do it successfully?

That's the challenge hunters face when moving to and from their stands. The world's most perfect deer stand can be ruined by a single sloppy approach. A buck isn't stupid. If he sees, hears or smells a human nearby, he *knows* he's in danger! His usual reaction is immediate departure. Now that

doesn't mean every encounter with a human sends a deer into the next county. If the encounter is a minor one—say the buck hears you walking 75 yards away—he'll likely just sneak quietly away and remain extra cautious for the next few days. But if you surprise him at close range and jump him from his bed more than once, he's likely to relocate. He doesn't have to move far, perhaps just a few hundred yards. But that modest change in his travel routine is enough to transform an extraordinarily good stand into an extraordinarily bad one.

When approaching and leaving stands, always assume deer are bedded within 50 yards of your location. Don't be impatient. Give yourself plenty of travel time. Silent stand approach and departure are part of every successful hunt.

Carefully prune branches and twigs along your approach path so they won't rub your clothing and create noise—and not just the final 50 feet. Clearing a path of 100 yards or more will ensure the quietest possible approach.

A bowhunt last fall taught me the importance of careful stand approach. I'd located a meadow that was a major whitetail bedding area. Undetected approach from any direction seemed impossible. Extremely thick cover protected two sides of the meadow, an unplanted crop field provided clear visibility of a third side, and the fourth side was a vertical cliff that dropped 75 feet into a creek. By bedding at the edge of the cliff, the deer could keep watch on the open meadow and easily spot any intruder long before he moved close.

What to do? I knew my only opportunity would be to set a tree stand in the thick cover across the meadow from the deer bed. But how could I reach such a stand for an evening hunt without spooking the deer bedded less than 100 yards away?

After positioning my stand 18 feet up the tree, I spent two hours carefully trimming a narrow path 200 yards through the thick cover to a dirt road. Each troublesome weed, leaf and twig was carefully removed. The effort was worthwhile. I hunted that stand on

just three occasions, using it only when wind conditions were perfectly in my favor. I had whitetails pass my stand on each occasion and I took two of them. Without the extra effort to ensure a silent approach and departure, that stand location would not have worked.

**Avoiding Overuse of Stands.** You work hard locating a terrific stand location. Nothing escapes your attention as you meticulously arrange every detail: proper height and camouflage, adequate background and foreground cover, correct proximity to game trails, careful attention to wind direction, a silent approach path, and so on. You *know* this is the perfect setup. Now you can't wait for opening weekend so you can hunt this stand morning, noon and evening, right?

Wrong! The best rule of deer stand usage is the old saying: "Less is more." Assuming your stand is well located, the less often you use it the more effective it will be. Hunting the same stand day after day is certain to alert nearby deer that something is amiss. Careful as you may be, you're bound to make some noise. You'll fidget a bit. You might cough or sneeze. There are plenty of ways for a stand hunter to draw attention to himself. And despite all your efforts to control human odor, your body is a veritable scent bomb emitting a steady stream of human stink every minute you're perched in that tree.

Rotating your hunting among three or four stands will minimize these problems. Only rarely will I use any stand more than once during a weekend hunt. And I never use a stand for two consecutive hunting sessions, such as a morning hunt following an evening hunt. Keeping stands free from human scent and disturbance is the best way to ensure their productivity.

If there's an outdoor experience more thrilling than watching an alert buck tiptoe cautiously toward your stand as the sunrise filters through the forest, I sure don't know what it is. And while stand hunting is the surest way of tagging a deer, doing it *right* takes effort. □

Thomas Torget is a freelance outdoor writer and hunter living in Texas.



# HIGH ALTITUDE GROUSE

If you want to hunt grouse in Virginia, you've got to put on your hiking shoes.

by Bob Gooch

**Y**ou go up, up, and up in Virginia to hunt grouse. And up.

The trip may begin on a busy interstate, but eventually you're traveling lesser Virginia highways. Next the yellow line disappears, and soon the pavement becomes narrower—and narrower. Now gravel is crunching beneath the wheels, and suddenly there is a rushing mountain stream to ford. Conventional wisdom says park the family sedan here.

But if you're driving a vehicle included in the broad "jeep" vernacular, you shift into low gear, kick in the 4 X 4, splash through the stream, and plow ahead. Now even the jeep trail gets narrow and rutty, and the motor groans as the wheels grasp for traction. The hunters grit their teeth and hang on. It's rough going at the best, but better than walking. Climb that same mountain on foot and you'll be dog tired even before the first bird flushes. Arrive on a high ridge refreshed and ready to hunt and you're ahead of the game.

Fortunately for hunters who do not own a tough old 4 X 4, you don't always have to go clear to the top of the mountain to find grouse, but the hunting is often better up there. It was that cold January day when Rick Underwood led Lynda Richardson, Tim Wright and me to the top of a Madison County mountain.

Rick is one of the most enthusiastic grouse hunters I know. He's never ready to quit. Hunt grouse with him and you'll greet the sunrise en route to

*Opposite: Ruffed grouse (Bonasa umbellus); photo by Steve Maslowski.*

the mountains, and you'll drive home in the dark—tired but happy. Lynda Richardson and Tim Wright are a husband and wife photography team, but on that day Tim had traded his camera for a shotgun. Lynda, lugging what seemed like a ton of photographic equipment, would do her shooting on film. For her sake I was glad we'd driven to the top of the mountain.

"We'll start up here," said Rick. "Walk along the ridges and let the dog do most of the hunting. We can drop lower if we have to, but I believe we'll find some birds up here."

That's part of the secret of hunting the mountain grouse of the rugged Southern Appalachians. Walt Lesser of West Virginia had pointed that out years ago on a snowy afternoon when we combed the Mountain State hills for the elusive ruffed grouse. "Get up on top and work along the ridges or just down the slopes, and you don't have to do a lot of climbing," he said. "Let the dogs do the hunting."

Regardless of how well-conditioned a hunter is, his dogs are usually in better shape, particularly young ones. Rick's Brittany Jack was not yet two years old, but he was a good hunter. I'd decided against bringing my aging setter Bo and left him whining in his kennel. He'd worked those rugged Madison County mountains often and proved his worth, but dogs don't know how to pace themselves. Bo would have taken off like a pup that January morning, but within a couple of hours he would have been dragging hopelessly. I'd save him for the easier quail flatlands.

We didn't move a feather on that high ridge, and dropped down to work the slopes. No climbing, just moving along the slope parallel to the top of the ridge. Once there was the thunder of a flushing bird far ahead, but no chance for a shot. Wary, late-season ruff. In fact, we didn't even see the bird, but there's no mistaking the thundering flush of a ruffed grouse.

Eventually, we decided to move even further down the slope and work a broad shelf. Once a high meadow, it was now a mixed pine and hardwood forest. A couple of weathered tombstones served as a reminder that a mountain family had once eked out a living in this rugged hill country.

From the high meadow we dropped even lower to spread out in a skirmish line straddling an old logging road that ran along a tiny mountain stream. Rick covered the lower side, Lynda and Tim the middle, and I the upper side.

The ideal grouse dog works close to the hunters, since most grouse don't hold well; photo by Lynda Richardson.

We'd moved just a short distance when I heard the roar of wildly beating wings. Boomm... and then a second shot echoed through the trees.

"Get him?"

"Nope," came the reply.

Eventually, we crossed a jeep trail that offered an easy climb back up the mountain to the parked vehicle. "Let's go back and move the jeep before we get too far down the mountain," Rick suggested. I joined him for the hike.

Lunch brought a welcome break, but it bothered me that our game pockets were empty. There was plenty of grouse food there in the mountain forest, particularly grapes, a favorite of the birds. It was late in the season, however, and the birds had been hunted hard. They were spooky. Getting a shot was difficult—even more so than normal.

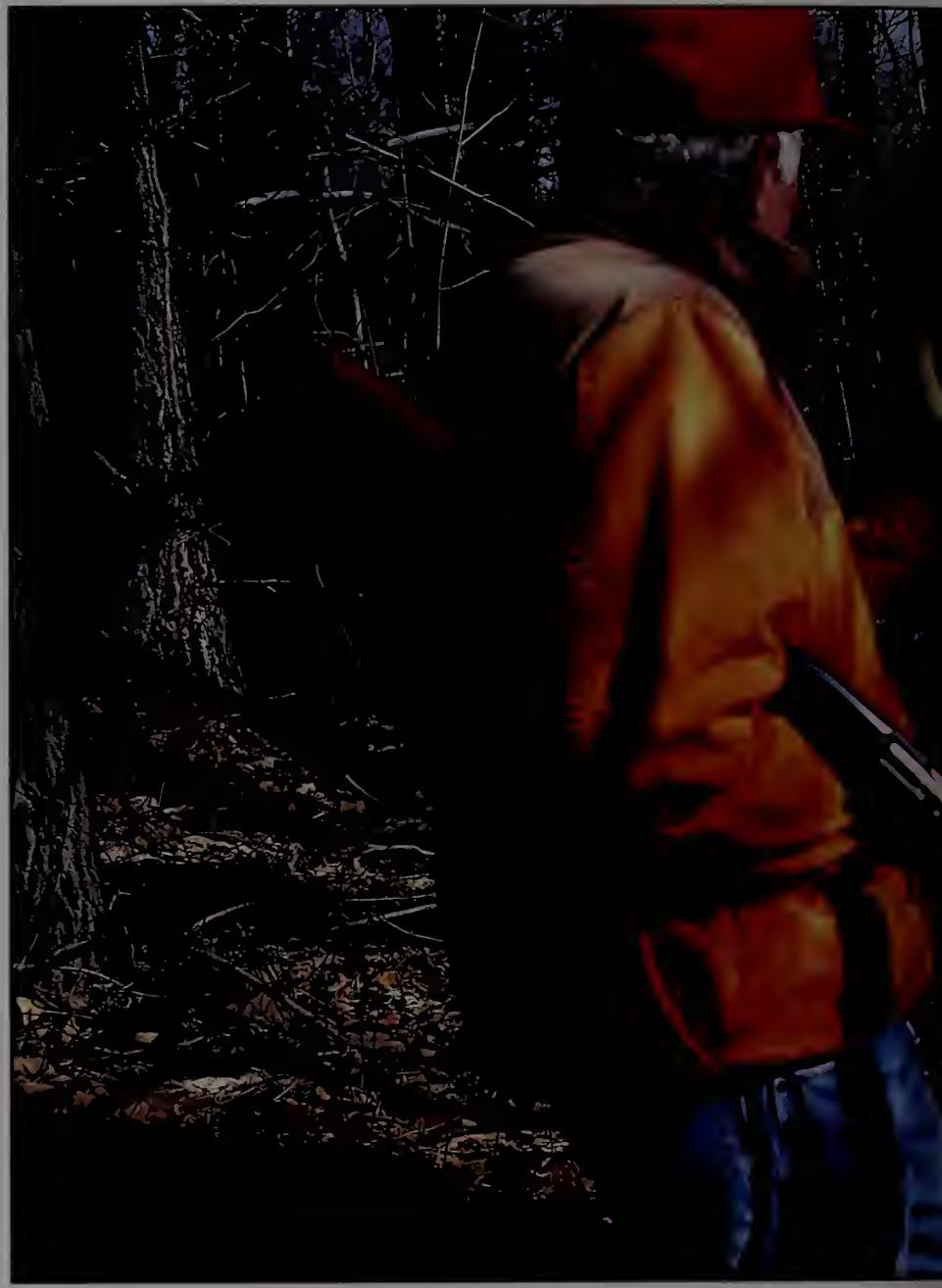
You don't get many easy shots at Virginia's ruffed grouse. Even when it doesn't put a tree between itself and the hunter, the grouse seems to fade into the forest. Try photographing a grouse in flight and see what you get. Usually nothing. Its color too closely matches the gray winter woods. The silhouette of a bird against the sky is rare.

Grouse also have the habit of flushing when the hunter is least prepared. Wade through a laurel thicket ready to shoot and nothing happens, but get through the thicket, stop to relax, and a bird will flush while you're catching your breath. The grouse obviously feels it is safe so long as the hunter is on the move, but once he stops the bird gets nervous.

That's why a good pointing dog is so valuable. When it comes on point the hunter can move in prepared to shoot—no wild swinging from an awkward position.

Experienced hunters pause with their guns at the ready position, but there's no reason to hold it long. If a bird is near, it's going to leave within seconds.

The ideal grouse dog works reasonably close to the hunter, but not so



close that it doesn't cover the area thoroughly. Grouse are not noted for holding well for dogs. Any pointing dog will point grouse, but the more cautious ones handle the spooky birds better.

Lunch over, we hit the woods again, working slowly and gradually back toward the top of the ridge. "There's one!" Lynda exclaimed. "I heard it flush." I thought I had heard it too, but wasn't sure.

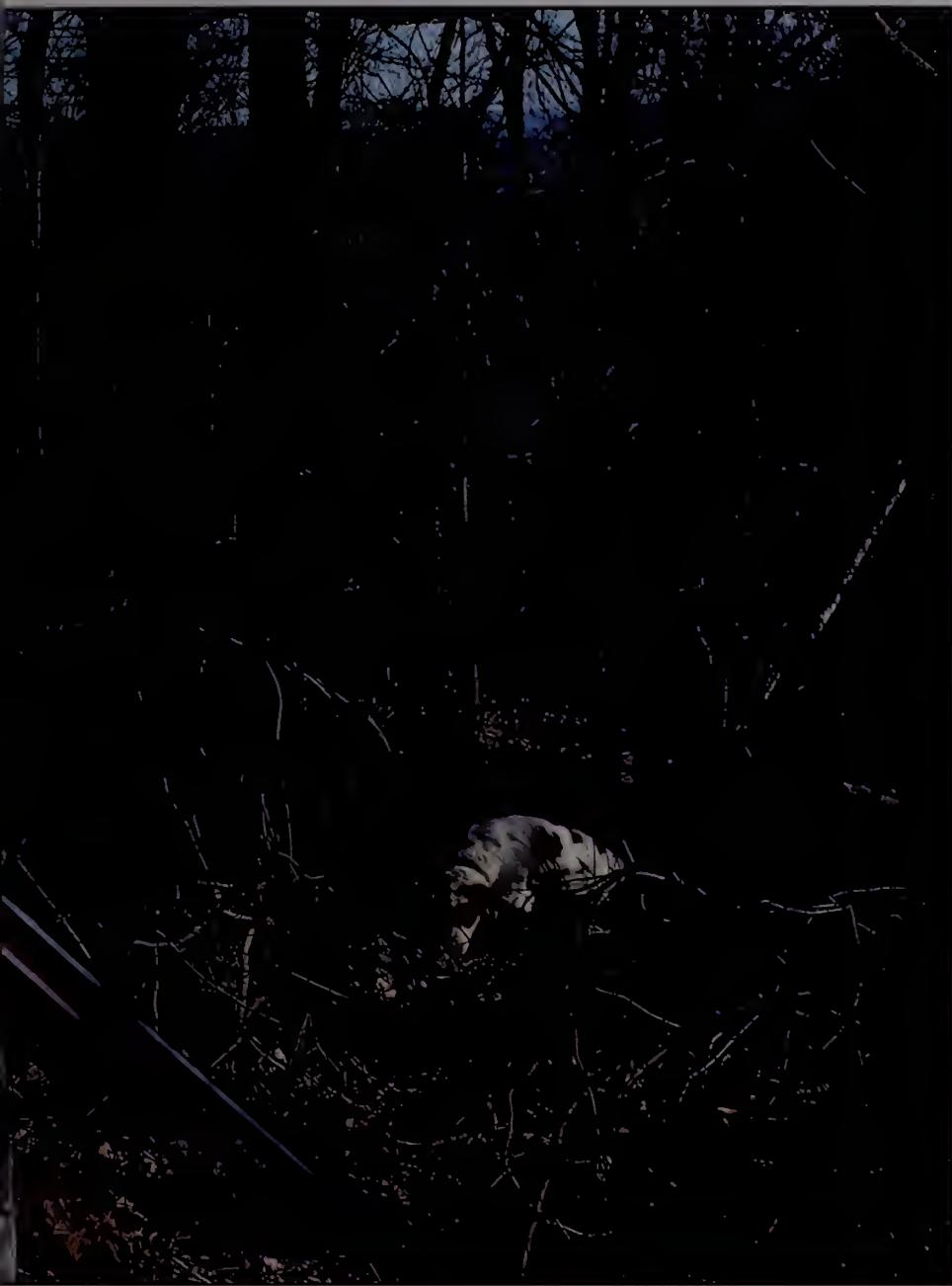
"They don't hold well late in the season," noted Rick as he turned toward us. Jack raced ahead and was

suddenly on a solid point. "Believe that's where the bird got up," someone said.

It was a beautiful point, however, and Lynda took advantage of the photographic opportunity. Jack was steady. The scent was obviously still strong, and he showed no signs of breaking his perfect point.

He finally gave up when we walked past him to continue the hunt.

Assembled opinions said that based on sound only the flushed grouse had beat a retreat along the side of the mountain. If so, we should be able to



get another chance at it. An accepted Virginia grouse hunting rule says that when a bird flushes up a mountain or along its slope, your chances of getting another shot are good. If it flies down the mountain, however, don't waste your time. Better to look for another bird.

The rule seemed to hold in this case, and a few minutes later I heard a wild flush to my left and slightly ahead—and then a pair of shots. I spotted a brownish-gray bird slanting off in front and swinging along the mountain slope again.

Boo!nmm...boomm...Nothing fell for my light 20-gauge either.

That brings up another point worth remembering. Tote a light gun in Virginia's grouse mountains. A heavy gun becomes heavier as the day progresses, and it swings too slowly. My light 20-gauge Remington automatic with its 26-inch barrel is light enough to carry all day in the woods and it swings fast.

I load up with size 8 field loads, the same ones I shoot in the dove fields in September and in the quail fields in November. While a grouse can be difficult to hit, it is not a tough bird. Hit

solidly with those light 8's, it will plummet to the forest floor.

Now we were on top of the mountain again. It had not been a hard climb as we had started well up the slope and worked slowly and gradually upward.

"Good shot!"

It was the first game of the day. Jack fetched Rick's bird beautifully though he hadn't located or pointed it.

A bird in the bag can make a mountain grouse hunt—even for a trio of hunters on a day when the birds are flushing wild and not giving the dog a chance. A bird each would have made it a red-letter day. After all, the limits are low, three birds a day and only 15 for the season. You can walk the soles off a pair of good hunting boots trying to make a season limit.

The ruffed grouse is one of the most widely distributed upland game birds in North America, but it is most abundant to the north where the forest lands are flatter and the hunting easier. The bird follows the Appalachian Range south and it's mostly there that you find them in Virginia and other southern mountain states. The hunting is tougher and more of a challenge here than it is in those northern forests.

Quail hunters periodically bag a ruff or two in the Blue Ridge foothills and east into the Piedmont, but their numbers are too low to make hunting them worthwhile. This could change down the road, however, if the Department of Game and Inland Fisheries' wildlife biologists are successful in experiments in establishing new populations in the Chickahominy Wildlife Management Area and selected other sites with wild-trapped birds. Maybe sometime in the not too distant future a lowlands quail hunter will be able to call his prize Brittany, pointer, or setter and head for a nearby woods with a reasonable chance of bagging a ruff or two.

Meantime, back in the Madison County mountains, we had worked our way back down to the parked vehicle. It was with obvious sighs of relief that we climbed in and drove home. In the dark. □

*Bob Gooch is an outdoor newspaper columnist and author of several books on hunting and fishing. He lives in Troy near Charlottesville.*



# Twenty Gauges, Small Game, and Hunting The Edge

If you're looking for the best day afield, try hunting the edge for small game with a lightweight gun.

by Bruce Ingram

**T**here's an old fishing saying that 90 percent of the fish are found in 10 percent of the water. Although I know of no similar hunting proverb, I feel it's accurate to state that oftentimes 90 percent of the small game will be found in 10 percent of the forest and fields.

Plain and simple, that 10 percent "honeyhole" for hunting territory is known as edge. Edge occurs where one kind of habitat meets, joins, or blends into another kind, and is a superlative place to find squirrels, rabbits, grouse, and quail. Basically, there are five major kinds of this transitional form of habitat: where woods meet field, where fields meet ponds, where woods border creeks, where an overgrown fencerow meets or leads to anything, and lastly, where a logging road winds its way through any kind of habitat.

My favorite kind of edge situation is the last one mentioned for a number of reasons. Old logging roads can take you through a variety of habitats, and they allow you to cover plenty of ground silently. Roads also enable us to easily spot sign such as tracks, droppings, and shed feathers.

Since, for the purposes of this article, we are dealing with hunting small game without a dog, old logging roads allow the sportsman in effect to be his

*Opposite: photo by Bruce Ingram.*

own bird, rabbit, or bushytail dog. If you move very slowly and quietly, if you pay attention to sign along the way, and if you are constantly vigilant for the slightest movement, you can approach relatively close to an animal before it flushes, flies, or flees.

Almost as good as logging roads are fencerows. Known also as hedgerows, this kind of edge situation is often the result of land "going to seed" both literally and figuratively. This may have occurred because a homesite has been abandoned or because a field (and its enclosing fencerow) are no longer being cultivated or grazed. Once a fencerow has been swallowed up by a variety of wild flora such as wild rosebushes, honeysuckle, blackberry, raspberry and grape vines, and greenbrier, then it becomes a real magnet for game.

Unfortunately, many people view hedgerows as eyesores. And the first thing they want to do is "clean them up." Several years ago, my wife and I bought some land in Craig County as a place to fish and hunt and a business

investment. One of the things that attracted me to the property was that the acreage had two long fencerows on it, and both were being choked—and I use that term in a positive manner—by numerous species of briars and brambles. I knew that those hedgerows were real sanctuaries for squirrels, rabbits, and grouse as well as many songbirds. A year rarely passes, however, without someone offering to "fix my place up" by bush hogging down my hedgerows. I always politely refuse and try to explain the benefits that the wildlife receive by being so "slovenly" (their word) about my property. I also have enjoyed many pleasant fall days hunting along those "eyesores."

One of my rows borders a field and the other runs along next to a stand of trees, and both rows eventually wind up at the edge of a woodlot. Although game can be found anywhere along the fencerows, the best spot is typically where the rows adjoin the woods. This transitional zone from one habitat to another—and by definition that's what edge is—should be hunted very carefully and slowly.

Yet another fine edge situation is where a woods meets a field. One particularly favorite hunting place of mine has this type of edge, and the property is always overrun with gray and fox

squirrels. The latter especially like to venture out and feed in the field while the gray squirrels can usually be found in the oak trees that border the field. This squirrel hotspot of mine lacks grouse and rabbits because the mature hardwoods have crowded out much of the undergrowth. However, if there are understory varieties of plants such as mountain laurel, rhododendron, and wild fruit vines at the woods-field border, then the area may well be worth checking out for fool hens and rabbits.

Places where woods border creeks or where fields adjoin ponds obviously can supply small game species with their three basic needs: food, water, and cover. An added positive for these areas is that along the shoreline of a stream or pond is a wonderful place to notice what kinds of animals have been frequenting these watering holes. The lush vegetation that borders a stream or pond can harbor good numbers of game animals. One such spot that I hunt is thick with such flora as rhododendron, river birch, alder, and small ironwood trees. That stretch of streambank also hides ruffed grouse. Rabbits, too, can be found along ponds at certain times of the day—especially early in the morning—where they have come to forage on the tender shoots of plants near the water.

Once you have located edge type habitat, the next step is to decide what kind of gun would be the choice for the day. Pump shotguns have been called the best all-around shotgun available for the money, and I think that statement is generally true. The problem that I used to have with my pump, however, is that I always seemed—given my slow reflexes—a little tardy at getting off that second shot. And if the choke tube that was in the gun at the time was, say, modified, I always seemed to need a full or improved cylinder choke.

After hunting with the pump for a few years, I traded it in for a twelve-gauge autoloader that likewise had choke tubes. Although the autoloader solved the problem of getting off rapid second and third shots, I still always seemed to have the wrong choke tube in. And while my twenty-gauge pump





was very light and came up easily, my twelve-gauge always seemed a trifle slow to get into shooting position. Plus, the autoloader and its additional weight were a real struggle to carry during a long day in the field.

Several years ago, I finally purchased what is, for me, a close to ideal small game gun—an over/under twenty-gauge. This gun shines in many of the areas that formerly caused frustrations. It's light, comes up quickly, gives me two quick shots, and offers two different chokes—improved cylinder and modified in that order. The only drawback is that I do not have a selective trigger on the scattergun which would enable me to select the barrel that I would like to fire first. A selective trigger, however, would have added substantially to the cost of the gun and would have put it out of my price range. In any event, the twenty allowed me to retire the twelve-gauge from small game hunting and I now use the autoloader only for turkey hunting and in Virginia counties where rifles are not permitted.

Also after much experimentation, I have finally settled on the size shot that seems to work best for my own use, No. 6 copperplated shot. Admittedly, this is not an ideal load for, say, rabbits, and it's not meant to be. But this particular size shot is a good overall compromise for small game, and—most importantly—my gun patterns very well with this load.

Many people argue loud and long about which load is the best one for various small game species. But if your particular gun doesn't pattern that shot well, you will end up missing much of what you shoot at, or worse, wounding the game and not recovering it. The best load is the one that your gun patterns the best and fulfills the requirements peculiar to the animal you are hunting and the habitat where it is found.

To get the most out of your edge hunting, pay close attention to the weather. If I could design an ideal day, it would be one that is overcast, no wind, a temperature in the 40s, with a slight mist falling. Game is often quite active on days such as this, and if the forest floor has been dampened, we

are able to move much more quietly!

The worst possible weather conditions are the ones most often associated with cold fronts: high cloudless blue skies, brisk winds, and low humidity. Just as a bass and other fish become very difficult to catch during a cold front, game animals often hunker down when a front crashes down. The wind tends to make squirrels and rabbits hole up and grouse and quail flush wildly. If you can choose the days that you can hunt, try to avoid cold fronts.

The last topic that needs to be discussed is just how to hunt the edge. Stand hunting can be an effective way to hunt squirrels, of course, but obviously gives you no chance to flush cottontails or birds. Thus, I think still hunting is the better option. Our goal here is to get as close as we can to these animals before they flush, and toward that end it's imperative that we move as slowly as possible.

This has been one of the hardest things for me to learn. I have to fight the constant drive within me "to cover lots of ground." The problem with moving quickly and covering plenty of ground, though, is that none of it ends up being covered very effectively and we flush the game far out of shotgun range.

I have found that my best days afield have been the ones where I hunted only a few hundred yards all day. If you have located some prime edge habitat, that is all the real estate you will need to walk over in order to be able to deposit a few game animals in your game bag. And while you are still hunting, be sure to wear at least a blaze orange hat. While stand hunting, I have had gray squirrels approach to within a few yards of me even though I had the orange on. In addition to letting other hunters know that you are in the area, blaze orange, I feel, has no negative effect on small game animals. Movement is what gives us away, not the color of the hat that we have on.

To maximize your hunting enjoyment this fall, consider concentrating on the edge type situations. The small game will be waiting there for you. □

Bruce Ingram is the Virginia editor for *Outdoor Life* magazine and a frequent contributor to *Virginia Wildlife*.

The areas where different habitats meet are the "honeyholes" of the small game hunter. These are the places where you find the most game. Fox squirrel (*Sciurus niger*); photo by Maslowski.



# PRIVATE LAND:

## *Is It All Locked Up?*

Contrary to popular belief, our latest landowner survey reveals that there's lots of private land out there available to hunt on if you're a sportsman—and a gentleman.

by Jim Bowman

**A**s a Virginia Game Department wildlife biologist, every fall I look forward to the annual ritual of setting up my portable deer-weighing station at any one of the 1,000 big game check stations in the state in order to collect biological information from the deer that hunters bring in. At a deer check station, one can hear an amazing array of stories and experiences from hunters, some quite humorous and usually described in vivid detail. It also provides a good opportunity for me to talk with landowners and to learn about individual interests and concerns. In short, it helps me to assess the "pulse" of an important segment of the public—those who own the land.

As I enjoyed my lunch on the tailgate of the truck one opening day at Northside Supply, a country store check station near Peaks of Otter in Bedford County, a gentleman strolled over to me from across the road. He proceeded to talk about a bad experience he had with a hunter earlier that same day. He explained that early in the morning he had walked to a hunt-

*Opposite: photo by William S. Lea.*

ing stand on his land located about a half mile from a public road. It wasn't long until he observed another hunter who had also walked onto his property, obviously intent on hunting the same area. Upon approaching the trespasser to make him aware that he was on private property, the landowner was resolutely requested to leave. Of course, the landowner was not the party who left the area, but the experience certainly had not been a pleasant one for him. Although he had noted trespassing on a few occasions previously, this certainly had been his worst experience with it.

I can say with assurance that the vast

majority of my conversations with private landowners through the years have dealt with the positive aspects of hunting and wildlife management. However, I also talk with some landowners, like the gentleman described above, who have experienced problems with managing wildlife or hunting on their properties. These problems are often related to poor behavior or abuse of private lands by hunters.

Although sportsmen sometimes try to discount such reports by stating that only a small minority of hunters cause such problems, in reality that minority may be considerably larger than we have been willing to admit. As a hunter, I find no pleasure in making such a statement, but this surely is one reason why more and more private lands are closed to public hunting.

It was concern about the needs and attitudes of these private landowners toward wildlife and hunting that prompted the Department of Game and Inland Fisheries to fund a research project to shed light on the issue. The project was designed and conducted by Dr. Brett Wright, Director of the

Center for Recreation Resources Policy at George Mason University. Two landowner surveys comprised the first two phases of the project, one to determine the hunter access policies of major corporate landowners in Virginia and the other to assess the attitudes and other characteristics of private, non-industrial landowners concerning hunting and wildlife-related matters. The third phase which is currently underway, targets licensed hunters. Findings of this research will be used to guide development of future Department programs to address the needs of

*Contrary to what many hunters think, there is much private land open to hunting in Virginia—open, that is, to the ethical and considerate sportsman;*  
photo by Maslowski.

the sporting public, the private landowner, and the wildlife resource.

Although a variety of information was sought, a primary objective of both landowner surveys was to assess the availability of private lands for hunting in Virginia. Private lands are an essential ingredient for public hunting opportunity because 85 percent of Virginia lands are in private ownership. This underscores their importance to the more than 450,000 resi-





dent and 50,000 non-resident hunters in Virginia, many of whom are always in need of places of hunt.

What did the surveys reveal about Virginia's private landowners? First of all, corporate owners control about 8 percent (1.75 millions acres) of these private lands. You may be pleasantly surprised to learn that 68 percent of the corporate lands surveyed were open to the general public for hunting either free of charge or by a special permit. Another 30 percent of corporate lands were leased to hunt clubs. Furthermore, less than 2 percent of corporate lands were actually closed to hunting.

Commercial forest industries control significant acreages in some areas, especially in central and eastern Virginia, and many sportsmen are familiar with the good hunting opportunities afforded on those lands. You may wonder, however, why corporate landowners are so generous with public access for hunting. Promotion of good public relations was stated as the primary reason. Major landowners have long recognized the value of maintaining good relations with the general public. By providing public hunting opportunities, corporations can develop a "good neighbor" image in the community. Furthermore, fees charged can offset maintenance costs associated with public access and administration of the hunting program.

There can, however, be significant costs and other problems associated with allowing public access for hunting. Corporate managers were asked to identify and rank hunting-related problems. Damage to roads and trails was the most severe problem, followed by damage to gates and fences. The third and fourth most serious concerns were legal liability and littering. Unauthorized trespass was also identified as a problem.

It is apparent that sportsmen can take positive steps to minimize most of these problems. First of all, vehicle travel on unimproved forest roads should be avoided during rainy weather to prevent unnecessary road damage.

Likewise, there is no excuse for littering at any time, including leaving behind spent shotgun shells.

Corporate managers do lease lands to hunt clubs to reduce hunter-related problems on some parcels of land. They feel that leasing gives them better control of hunters and that hunt clubs tend to take better care of roads, gates and other assets. Additionally, a hunt club can be held accountable for damages incurred during hunting seasons. However, in spite of the perceived advantages of leasing to hunt clubs, most corporate landowners indicated that no more than 50 percent of lands would be leased.

The second phase of the study sought to determine characteristics of private, non-industrial landowners and their attitudes about wildlife-related matters, including hunting access. The survey was directed at all rural landowners who owned 40+ acres in a 10-county survey area. Rural counties were selected to represent the Mountain, Piedmont and Tidewater regions.

It may come as some surprise to many people that the average landowner ranked farming and ranching as considerably less important than other reasons for owning their land. In fact, farming/ranching ranked 5th in importance to privacy, living in a rural environment, the opportunity to enjoy outdoor recreation, and aesthetic enjoyment. It appears that although farming continues to be the primary means of earning a living for some Virginia landowners, it is a secondary source of income for many others.

Most private landowners gave their property high scores for quality of wildlife habitat present. This was especially true for woodland species such as deer, squirrels, and wild turkeys. Generally, landowners in the Tidewater and Piedmont Regions felt they had better wildlife habitat than did Mountain landowners. The landowner's perception of habitat quality could conceivably influence his decisions about permitting hunting or the need to seek professional assistance to improve wildlife habitat.



Well, how much access for hunting do Virginia's non-industrial private landowners permit? Among survey respondents, about 10 percent prohibited hunting on their land. Although this statistic sounds fairly low, it is twice as high as the national average of land closures determined by Dr. Brett Wright in earlier surveys. However, this posted land represents less than 6 percent of all the land surveyed. This group placed a high degree of importance on aesthetic enjoyment and privacy as reasons for owning the land.

earlier national study, almost 40 percent of landowners nationwide retained hunting privileges for themselves only. The Virginia survey, however, indicates that exclusive access policies are not widespread, which is good news for Virginia sportsmen.

By far the largest amount of non-industrial private lands were found to be open to hunting to those who were personally acquainted with the landowner. This accounted for 45 percent of Virginia private lands and an astounding 10 million acres statewide. Many hunters from rural communities gain access to private lands through acquaintances with neighbors, friends and relatives, and this method will continue to be of premier importance to Virginia sportsmen.

But what about the hunter who is not acquainted with any rural landowners—does he have to depend entirely upon public lands for hunting access? With the majority of Virginians residing in suburban areas such as the "Golden Crescent" of Northern Virginia-Richmond-Virginia Beach, this is an exceedingly important question. Fortunately, the Virginia landowner study found that 27 percent of surveyed lands were generally open to the public for hunting, and it was not necessary to be personally acquainted with the landowner to gain access. This implies that it is possible for Virginia hunters to gain permission to hunt on about 6 million acres of non-industrial private lands. Furthermore, landowners in this category were generally less concerned than others about behavior of hunters, liability and other perceived problems associated with public hunting. However, if these lands are to remain available for hunting by permission, sportsmen must exhibit the utmost respect for the landowners' property and its wildlife.

Are there opportunities for purchasing hunting privileges in Virginia? The answer is yes. Although by definition all native wildlife belongs to the State and cannot be legally bought and sold, the privilege of hunting can be bought and sold. In fact, more than 12

percent of surveyed non-industrial landowners either leased or charged a fee for hunting privileges, accounting for almost 3 million acres statewide. Interestingly, landowners who leased hunting privileges tended to rank farming/ranching as primary reasons for land ownership, which differed from landowners who did not lease. They apparently view sport hunting as a desirable source of additional income from their property. They also indicated their belief that leasing provided accountability for any hunter-associated damages that might occur. Although leasing of hunting privileges is currently a more common practice in eastern Virginia than elsewhere, it seems likely that the practice will increase as more landowners recognize its potential benefits.

In summary, the landowner surveys provided encouraging news about availability of lands for hunting in Virginia. More than 90 percent of private lands are open to some form of hunting, although access may be limited by the landowners. Most landowners are quite concerned about the actions and attitudes of hunters who seek access to private lands. Good hunter-landowner relations are vital to the perpetuation of public hunting on private lands. Landowners who observe or experience poor behavior among the hunting public are much more likely to restrict or eliminate hunting on their property. It should be the goal of all sportsmen to always act responsibly and encourage good relations with Virginia's landowners.

As I prepare to work another check station this season, I will assuredly hear again the stories about that first deer bagged by a proud young hunter. I know that I will also have the privilege of talking with Virginia landowners, many of whom are avid hunters. Maybe just maybe, this will be the year that I will hear only praise about the respectful behavior of sportsmen who enjoyed the privilege of hunting on private land. □

Jim Bouman is a supervising game biologist with the Department's Wildlife Division.

*"More than 90 percent of private lands are open to some form of hunting, although access may be limited by the landowners. Most landowners are quite concerned about the actions and attitudes of hunters that seek access to private lands."*  
**Opposite: photo by F. Eugene Hester.**

They also rated wildlife habitat quality of their land as relatively low. Additionally, this group displayed evidence of strong anti-hunting beliefs, so it is unlikely that these lands will be open to hunting at a future time.

Only about 3 percent of surveyed lands were hunted exclusively by the landowner, accounting for a relatively small amount of land statewide. Hunting privileges on these lands were strictly limited to the landowner. In an

by Bob Duncan

# The Cutting Edge

## DCAP &

**T**he two major goals of the Virginia Department of Game and Inland Fisheries' deer management program are to provide as much deer hunting opportunity as possible without harming the resource and to direct the population control necessary for herd health and minimized crop damage. Virginia's deer management program is based on the premise that white-tailed deer can best be managed by controlling the harvest of the female segment of the population. Thus, statewide harvest regulations adjust harvest limits every two years to maintain the health and quality of the white-tailed deer population in the state by establishing bag and sex limits on the harvest of deer on a county by county basis.

Two new deer management programs, the Damage Control Assistance Program (DCAP) and the Deer Management Assistance Program (DMAP) were created last year to fine-tune these harvest regulations on a local level. DCAP is designed to relieve crop damage problems while providing increased hunting opportunity during the legal season, and DMAP's goal is to allow deer hunt clubs to cooperate on a local level to improve the quality and health of their deer herds. Nearly  $\frac{1}{2}$  million acres of land (498,281) were enrolled during the first year of these programs. The acreage for DCAP and DMAP were nearly equal for the 1988-89 hunting season with 49.1 percent and 50.1 percent, respectively.

### Damage Control Assistance Program

The three major objectives of the DCAP program are: 1) to better control crop and other property damage

by providing site-specific relief, 2) to maximize hunter participation and 3) to put the additional kill into the open deer hunting season.

In 1988, 453 individual landowners received DCAP permits on 493 tracts of land in 68 counties and cities statewide. Forty-six counties (68 percent) were located in Eastern Virginia. A total of 244,685 acres were enrolled in the program for the 1988-89 hunting season with 180,819 acres (74 per-

cent of those cooperators responded with the following information: When asked if they felt that deer damage would be reduced because of the DCAP program, 45.2 percent of them said yes. Seventy-five percent of all cooperators indicated that they planned to participate in the program again this year. Over 84 percent rated the deer population as too high on their property.

When asked about the problems

**Two new deer management programs started in Virginia last year have caught the interest of wildlife professionals across the country. Here's an update on these two success stories.**

cent) east of the Blue Ridge and 63,866 acres (26 percent) west of the Blue Ridge.

A total of 15,697 DCAP permits were issued for an average of 35 per landowner. Preliminary analysis based on actual returned DCAP permits (83 percent of the total number of permits issued) indicates that DCAP hunters enjoyed a success rate of 29 percent. The total projected DCAP harvest is 4,552 deer, representing 3.9 percent of the 1988 statewide deer harvest.

All 453 DCAP cooperators were asked to participate in an evaluation of the program to provide the Game Department some feedback from the landowner's perspective. Nearly 72

encountered with the program, 32.6 percent had no problems, while 55.3 percent had a problem with the limit of only one DCAP permit per hunter. When asked if landowners allowed more hunters to deer hunt on their property as a result of the program, 52.9 percent said they had. Regarding the overall rating of the DCAP program, 75.7 percent of the cooperators rated the program as either satisfactory or excellent.

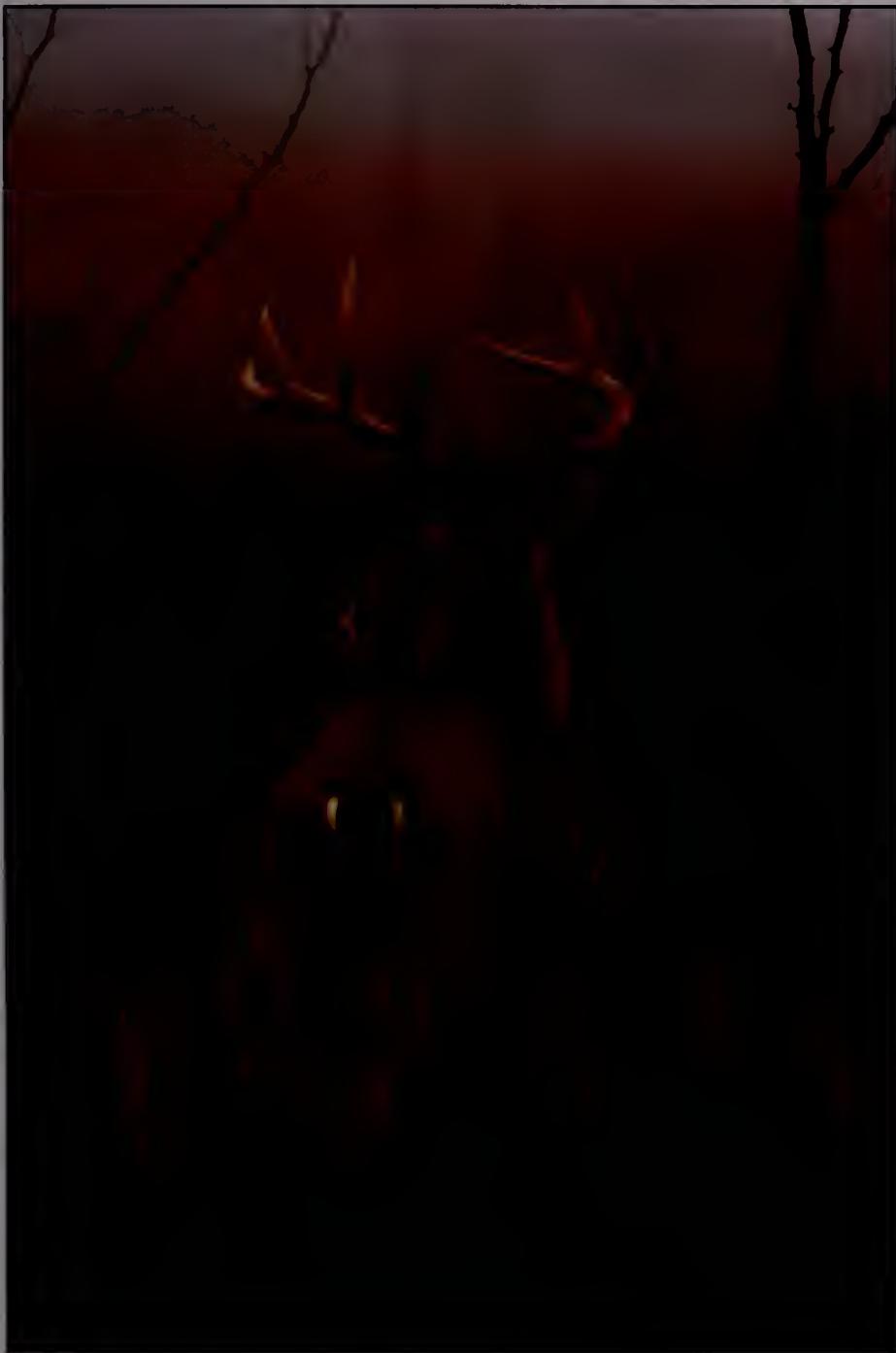
### Deer Management Assistance Program

The DMAP program offers advantages to deer hunt clubs and landowners interested in improving herd conditions and provides a more liberal

# of Deer Management

## DMAP

White-tailed deer (*Odocoileus virginianus*); photo by Thomas Torget.



harvest of antlerless deer than could be provided under our current system of county regulations.

Approximately 90 applications were distributed to deer hunt clubs interested in the DMAP program for the 1988-89 hunting season. Fifty-six clubs submitted applications for formal participation in the DMAP program and approximately 253,596 acres were enrolled. Nine cooperators, including two military installations, one private timber company and six deer hunt clubs qualified for 960 antlerless DMAP deer permits. A total of 762 deer were harvested for a success rate of 79.4 percent.

For the 1989-90 season, participation in the Game Department's DMAP is up. The number of acres of land enrolled in the DMAP for the 89-90 season is 344,648 acres, which represents an increase of 91,052 acres or 36 percent. The number of hunt clubs and landowners participating this season is 73 compared to 53 cooperators in the 88-89 season. Sixty cooperators will receive a total of 2,864 special antlerless deer tags compared to only nine cooperators having qualified for 960 tags in 1988.

Both the DCAP and DMAP programs have become model programs in wildlife management, and so far seem to be quite successful in providing increased hunting opportunities, relief for landowners, and increased quality of Virginia's deer herds. For more information about DCAP and DMAP, contact the Wildlife Division, Virginia Department of Game and Inland Fisheries, P.O. Box 11104, Richmond, VA 23230-1104. □

*Bob Duncan is an assistant chief with the Department's Wildlife Division.*

Road hunters. How many times have you seen them during deer season? I'm not talking about guys riding to or from a hunt, or legitimate hunters driving slowly down the road, looking for a stray dog. I'm talking about the ones who cruise the back roads in farm country, looking out across pastures, cutover fields, and along the edges of the woods. The buck, doe or even turkey they shoot at may be running ahead of someone else's hounds, or it may be standing in a patch of cover in the middle of a field on posted land. Road hunters don't care. Since they are hunting illegally in the first place, why should they bother with trivial concerns like trespass or even simple manners? These guys are hurting us. Almost nothing else they could do would be more effective at insuring that much of the hunting we enjoy and take for granted today will be severely restricted in the future, and some of it might be outlawed altogether.

There are four major problems with road hunting. In the first place, it is illegal. In the second place, it can be quite dangerous to property, livestock and people. In the third place, it infuriates landowners, some of whom eventually become bitter anti-hunters. In the fourth place, it often alarms and offends the non-hunting public.

Hunting from a vehicle is outlawed statewide. Furthermore, state law prohibits the discharge of a firearm from or within 100 yards of any public road. A number of counties prohibit the possession of loaded guns in a vehicle during all or part of the year. Most of the laws are plainly outlined in the 1989-90 edition of the digest of hunting regulations (that little pamphlet the clerk always gives you when you buy your yearly hunting license). I asked a game warden once if any of the people he had arrested for road hunting or shooting from vehicles protested that they didn't know their actions were illegal—not that such ignorance would have constituted an excuse, of course. "Not anymore," he said. "They all know."

Jay Calhoun, a former game warden in Pittsylvania County for 13 years and an avid hunter and conservationist

## IT'S DOWN AND DIRTY

## IT'S AGAINST THE LAW

## IT'S ROAD HUNTING

Road hunting is illegal in Virginia, but too many so-called hunters get away with it, giving sportsmen a bad name. It's time to put a stop to it.

by Steve Ausband



himself, considers road hunting one of the most serious problems facing legitimate sportsmen. Besides alienating landowners, its very visibility often makes non-hunters so uncomfortable that they begin to develop anti-hunting attitudes. The general public, he explains, can be divided into three camps: those who approve of hunting; those who do not approve of it; and those who are undecided. The third group is by far the largest. Efforts by considerate and thoughtful individual sportsmen and hunt clubs can win friends and supporters. So can educational programs such as the Virginia Hunter Education Program. As our population grows and more pressures are applied to our natural resources, the need to promote the image of the responsible outdoorsman becomes increasingly important. One vehicle full of yahoos, however, can do more damage to our image on one November afternoon than we can repair in months of hard work.

I work with a group of people, mostly non-hunters, whose attitudes toward hunting range from mild approval through ambivalence to mild hostility. They are good folks, they all vote, and at least some of them occasionally write their representatives when they feel strongly about certain issues. In other words, they are exactly like the folks you work with; they represent a pretty good cross section of the non-hunting public. So it alarms me when I hear them talking about their nervousness when they see guys with guns standing on the edge of a public highway. I sympathize with their very real disgust when they describe seeing someone shoot from a parked vehicle at a deer in a pasture. I flinch when I hear them laughing derisively about trucks full of rednecks riding around, drinking beer and disregarding both the rights and the safety of others. I hasten to tell them their concerns are exaggerated.

"Maybe the guys you saw were just picking up dogs by the road," I offer. "Or maybe they were waiting for some friends to come across the field. Maybe they weren't even hunters."

"Perhaps," they say politely, but their faces say that they know they

have seen road hunters, and they don't like it.

"Road hunting is illegal," I explain. "Legitimate hunters won't have anything to do with it. What you saw is the exception, not the rule."

"I'm sure you're right," they say, but their faces say, "Maybe you don't do it, and maybe the people you know don't, but I know what I have seen."

If the problem of hunter image presented to the general public by road hunting is bad, that presented to the landowner is much worse. Some of the these people feel violated, endangered, and abused. A lot of them are getting very angry, and I don't blame them.

Rick and Jeanne Faulconer have a little 110-acre spread near Sutherlin. A public road wraps most of the way around the farm, and therein lies the problem. Jeanne told me that the weekend before Christmas last year was typical. She and her husband saw a man sitting in a lawn chair in the back of a pickup truck parked across the road from their house. He looked pretty comfortable—had an open can of beer, a good chair, and a rifle. He was staring across the Faulconers' pasture, where their horses were grazing, at a patch of woods. Someone had just released dogs on the other side of those woods, where the road curved around the edge of the farm, and the road hunter had a pretty good view from the back of the truck. If a shot had presented itself, it could only have been over the heads of the horses, or perhaps by the farmhouse. The man could have chosen not to shoot, of course, but he didn't look as if he had come just to enjoy the view. He had a wonderful field of fire—if one discounts the danger of killing a horse, putting a bullet through the house, or plugging a tractor. At first the man lied, telling Rick he had permission to hunt Rick's land. (This was immaterial, of course; nobody has permission to hunt from a vehicle on a public road, much less to shoot across the road, among the livestock, onto posted property.)

When challenged, he pointed out that Rick did not own the side of the road on which he was parked, and that he did have permission to be there.

Hunting from a vehicle is strictly illegal in Virginia, as is shooting a deer from the road, but both are sadly prevalent among slob hunters because of the ease of locating and killing game. Still, both are despicable acts which sicken sportsmen and the nonhunting public alike. Photo of white-tailed deer (*Odocoileus virginianus*) by William S. Lea.



This was also a lie, of course, and it was equally immaterial. Rick went in to call the law, but the violator and his friends were gone before the authorities arrived. The same sort of thing has happened at least once a year, every year since the Faulconers purchased the farm.

Rick hunts, and he allows a little hunting on his place, but he carefully controls access. He says some of his neighbors have been so outraged by the road hunters, however, that they never allow hunting of any kind on their property. It is just too easy for them to see all hunters as variations of the guy with the lawn chair in the

pickup truck. There are other kinds of outlaws who hurt us too, of course—casual trespassers, vandals, night hunters—but few of them are as visible, and therefore as damaging, as road hunters.

One of the problems with the enforcement of regulations against road hunting is the lack of manpower. Pittsylvania County has 1,600 miles of roads—a lot of territory for one or two men to cover. Even with some welcome help from the sheriff's department (which, of course, has its own work to do during deer season as well), enforcement is difficult. Road hunters are often charged with trespass as well



intoxicated in Virginia, and the threat of that expense has apparently reduced drunk driving. Perhaps a similar approach would work for road hunters.

Not everybody who cruises the roads looking for deer is a road hunter. Some are scouting, and some have or will get permission to hunt the area they survey from the road. I know of one farmer who was so amazed when a couple of young hunters stopped and asked permission to hunt a buck they had just seen from the road, that he virtually gave them the run of his place. He was so accustomed to dealing with the "shoot 'em first, ask later or never" hunters who drove by his farm every fall that he regarded the boys as examples of sportsmanship and courtesy, and he wanted to encourage those virtues. The temptation to shoot, especially for a couple of teenagers who might not have had much experience or success as hunters yet, must have been strong, and they could have gotten away with it. Those boys will make pretty good hunters one day, and I'm glad he encouraged them. I'd have probably let them hunt, too.

Our responsibility as sportsmen is twofold; at least it is if we are going to insure that hunting remains a part of the outdoor experience for future generations of hunters. One part of that responsibility is to help the public realize that hunting is a valid tool of wildlife management, that it is safe and healthy recreation (statistically, it is somewhat safer than either fishing or water skiing), and that it does not threaten game populations—in fact, it is the chief means by which revenues for the management and protection of all kinds of wildlife are raised. The other part of the responsibility is to police our ranks. We can't afford to look away or not get involved when someone violates game laws or acts in such a way as to tarnish the image of the legitimate sportsman. The offenders among us are a small minority, but they make a lot of trouble. We've got to care enough to stop them. □

as with the road-hunting offense itself, but they have to be caught first. Another problem is the variation in penalties. Some judges, especially those who are either landowners or hunters or both, hit the offenders with fairly stiff penalties. Others are more lenient. The tough ones, according to Calhoun, make an impression, and word travels fast.

What can we do to help? The laws are already on the books; we don't need to press for more. Certainly we need to make sure our younger hunters are educated properly, and that they behave responsibly. Perhaps we can suggest the need for stiffer penal-

ties for violators, too. As Jay Calhoun pointed out, a person who spends from \$500 to \$700 dollars on a rifle, boots, and clothing might regard a \$25 or \$50 fine as a minor inconvenience. Some of us might be deterred by the embarrassment factor, but I suppose a slob who hunts with beer and a lawn chair out of a parked truck beside a pasture full of horses doesn't embarrass very easily. Fines of over \$100 maybe way over \$100—and the possibility of license revocation, however, might be more intimidating. People often drop vices when the vices get prohibitively expensive. We have made it terrifically expensive to drive while

*Steve Ausband is the chairman of the English Department of Averett College in Danville, and is a frequent contributor to Virginia Wildlife.*

# Family Outdoors

Spike Knuth

## Hickory Harvest

Fall is a time of harvest. It is a time when the promises of the blossoms of spring are fulfilled in the form of fruits, vegetables and nuts, not only the domestic crops, but the wild growing varieties of Nature's "garden."

The hickory nut is a prime example. To the outdoor-minded family trying to squeeze the last drop of activity out of a waning autumn, hickory nut gathering can be a fun-filled and rewarding family outing.

With fond memories I remember one such November outing. Ordinarily, I might have been attired in hunting clothes walking along with a hunting buddy toting a 12-gauge shotgun with an eye out for grouse. However, on this occasion I was accompanied by my wife and two sons, then ages three and five. Instead of a shotgun, we were armed with a grass rake, and a couple of buckets, and our "quarry" was the hickory nut.

We hadn't gone more than 50 feet when we were startled by frantically flapping wings and cracking branches off to our right. As our heart rates returned to normal, we gazed at a pair of long-eared owls that had visited the woods, probably for a night of rabbit hunting. The little creatures with the powder puff tails were numerous in the area.

Even my two little guys got excited over the encounter, but now it was time to continue on, picking up sticks, pine cones and pretty leaves for their "collections."

My wife had scouted out the woods a week earlier and had found two unusually productive shagbark hickories which had somehow eluded the attentions of other nut gatherers. Most hickories shed their nuts by late-October, but many of the fallen nuts are covered by a carpet of leaves and missed. We turned off the main trail onto a smaller path on our way to the "treasure."

We hadn't gone more than another 30 feet when again the stillness was

shattered by the sound of whirring wings. This time it was a familiar sound as a ruffed grouse crashed its way through saplings, heading for a stand of conifers.

We reached our destination and were soon raking away leaves to uncover the many hickory nuts that lay waiting for us. It didn't take long, and the boys began spotting and picking up hickory nuts with great enthusiasm. The woods rang with happy cries of "Here's one!" or "I found one," and "Oooh, here's a big one."

Big, bright, inquisitive eyes investigated the round, outer casings that still covered some of the nuts. Little hands stirred and rattled the whitish hard-shelled nuts which were rapidly filling our plastic buckets.

Hickory trees are among the most common of our native nuts, having been used extensively by the Indians and settlers of our growing nation. Ewell Gibbons, the famous "forager," considered the shagbark hickory as the "king of them all," excluding the pecan, which is grown commercially in the South. Gibbons related that "southern Indians tribes used to pound hickory nuts, shells and all, into a powder which they then boiled in water to make a kind of nut milk. The milky liquor was called 'Powchoicora' in one Indian language, from whence the word hickory came."

Hickories are found growing in moist, rich soils on well-drained hillsides, fields and open forests. They are slow-growing trees with distinctive thick twigs and a large, long tap root. Hickories usually don't produce nuts until after 80 years. The thick twigs of the hickory have large buds through the winter, and with the coming of spring they unfold into leaves like some strange, rare flower.

The shagbark hickory is so named because of its shaggy appearance. New, growing bark forces old bark outward, giving it a distinctive, ragged look. In the Midwest it was common for farmers to plant them as part of their

windbreaks, which probably accounts for the fact that the large symmetrical trees with straight trunks can be found in large numbers along roadsides, driveways and old farmsteads. In Virginia, shagbark hickories are mostly found in northern Virginia or at higher elevations. Shagbarks are apparently more of a cooler climate tree.

The wood of the hickory is strong and resilient and is useful for tool handles, split-rail fences and athletic equipment. It is used in outdoor cooking and for smoking meats. Dried strips of outer bark make excellent kindling for campfires. For the squirrel hunter, the hickory woods is a known haunt of the gray squirrel.

There are a variety of other hickory species, and while all of them are edible, the taste of some are not very appealing. The bitternut, as the name implies, is bitter, small and thin-shelled. The mockernut has a sweet-tasting kernel, but is very small and hard to extract from its heavy hard shell. The shellbark hickory is similar to the shagbark. The husk of the shagbark splits into four parts when ripe and produces a smooth, four-ribbed tan shell.

With rake and two full buckets of tasty hickory nuts, we filed out of the woods now almost dark. The nuts were destined to be spread out on a newspaper to dry, then be cracked open and have their tasty kernels removed. Hickory nut meats are high in nutritional value and can be eaten either raw or used in baking cookies and cakes.

Reluctantly, the boys filed out ahead of us. Just seeing their faces made the whole activity worthwhile. We did something a little different, saw some new things and learned to appreciate the outdoors a little more. Happy, satisfied voices called back to us, "Let's do this again sometime!" Our outing had provided a wonderful outdoor experience as well as a bountiful hickory harvest. □

# Habitat

by Nancy Hugo

An oak is the best expression of a tree. It's everything a tree should be—strong, sturdy, long-lived, majestic. It's been worshipped by ancients, praised by poets, but perhaps no one appreciates an oak more than an animal making a winter meal of acorns. In its two to three century lifetime, an oak will produce tens of millions of acorns that sustain hundreds of species of animals. The oak is also extravagant in its offerings of leaves and twigs for nests, cavities and crotches for nest sites, canopy for cover, roominess for roosts. In fact, from the bacteria in its leaf litter to the badger burrows under its roots, an oak supports a multitude of life.

Squirrels, wood ducks, black bears, raccoons, deer, ruffed grouse, jays, and woodpeckers are at the top of the list of animals who make the most use of acorns. White oak acorns—that is, acorns of trees that belong to the white oak group—are the most palatable to wildlife because they are sweeter (lower in bitter tannin) than the acorns of oaks that belong to the black oak group. This division of oaks into white and black oak groups can be confusing, but it's supposed to help us keep the oaks straight. Oaks that belong to the white oak group include the white oak, the post oak, and the chestnut oak. These are oaks with round-lobed leaves and acorns that mature in a single season. Oaks that belong to the black oak group include trees like the pin oak, the red oak, and the willow oak; they have leaves with bristle-pointed lobes and take two seasons to produce a crop of acorns.

Which oak is the best to grow? The best oak to grow is usually the one growing in your area already. Look around and see which oaks are doing best along your roadsides and in your woods; they are the ones best suited to local conditions. For suburban landscapes, one of the most frequently planted of our native oaks is the pin oak. It's relatively easy to transplant, tolerates clay soils, and is fairly toler-



White oak (*Quercus alba*); photo by Robert C. Simpson.

ant of city conditions. Red oaks and willow oaks also tolerate city conditions.

But if you'd like to plant the most majestic of all oaks, consider planting a white oak. It prefers rich soil, is relatively intolerant of city conditions, and is harder to transplant than some of the other oaks, but, in my opinion, it is the finest oak of all. Grown in the open, its branches sweep out horizontally as if to defy gravity and make every engineer wonder. It also happens to be the oak with which we built the country. It was the wood of the white oak that built the log cabins, barns, mills, bridges, ships, and forts of the early settlers. Pioneers even used white oaks to indicate the presence of fertile soil and the best places to clear land for farming. It seems fitting that we should put a few of them back.

Given the ascendancy of the oak, why aren't we planting more of them? One reason, I suppose, is that they don't have ornamental blossoms and they are notoriously slow growing. But the new pink leaves of an oak can be as beautiful as any cherry blossom, and slow growth is the price we pay for longevity in trees. Slow growth is relative anyway. A friend who cleared a piece of land 15 years ago and now has oaks 25 feet high from acorns sown by blue jays doesn't think they're so slow growing. (Of course, if he'd planted poplars they'd be 60 feet tall, and oaks grow more slowly as they get older.)

I've also heard a story about an 80-year-old man who planted an acorn for his grandchildren and lived to sit in the tree's shade. That seems a just reward for a man wise enough to plant an oak. □

# Boating Tips

by William Antozzi

## Help!

A boater often finds himself and his boat in need of assistance. The vessel may be sinking, swamped, capsized, on fire or lost. It might be disabled because of engine trouble, dismasting, lack of fuel or sickness of personnel on board. The weather may be bad with high wind and big waves, and it may be pitch dark when the trouble starts. At these times it is good to know where to turn for help.

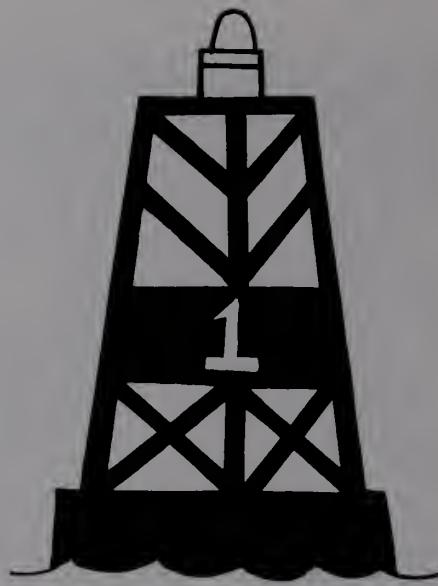
Any vessel with a VHF-FM marine radio can call for help. Without such a radio, visual distress signals might bring a rescuer, as there is always the possibility that another boat may happen to pass nearby and notice that there is a vessel in trouble.

The United States Coast Guard (CG) serves as search and rescue coordinator for all maritime emergencies and is the appropriate point of contact for vessel operators who need assistance. If boaters are in distress the CG will take immediate steps to help.

The Coast Guard's primary search and rescue role is to assist mariners in distress. If boaters are not in distress and alternate sources are available, the CG will normally coordinate assistance efforts. If the vessel operator has a marina or commercial firm that he wants contacted, the Coast Guard will attempt to do so. Boaters may also call those agencies directly on Channel 16 VHF/FM or through a marine operator.

If this is unsuccessful, the Coast Guard will make a Marine Assistance Request Broadcast (MARB). The broadcast announces that help is needed, give the vessel location and invite others to come and help.

A commercial firm may answer the MARB. It is CG policy not to interfere with commercial enterprise, so if a



commercial firm is available to provide safe, timely and appropriate help, the CG normally will not provide direct on-scene assistance. However, there is a charge for these services. If boaters agree to the assistance of a commercial firm and then refuse this service when it arrives on scene, they still may be legally obligated to pay a fee.

In addition to Coast Guard, Coast Guard Auxiliary and commercial firms, others who may be available to assist include marine patrols of the Virginia Department of Game and Inland Fisheries, a fellow mariner, a local fire or police department or some other public agency. Sometimes, however, a fellow boater, although well meaning, may not have the equipment or skills needed to provide safe and effective help.

If the problem requires a tow, the CG or CG auxiliary normally will tow a boat to the nearest location for repairs or tow it back to home port. Most others providing a tow will do the same thing. Commercial firms will probably tow boats to whatever location is desired, but longer distance towing obviously increases cost.

The Coast Guard does not operate on most of Virginia's water impoundments. Assistance on those waters is usually provided by fellow boaters or game wardens. Three very popular impoundments are Lake Anna, Lake Chesdin, and Smith Mountain Lake. On those lakes United States Coast Guard Auxiliary vessels, supported by the Virginia Department of Game and Inland Fisheries, patrol the waters to make rescues or assists as required. This past summer 71 recreational vessels were rescued or assisted on those waters. □

## A Venison Holiday Meal

by Joan Cone

Virginia deer is wonderful eating and far healthier for you than beef. It has 1/3 more protein and 1/3 fewer calories.

There are just two basic rules you need to remember when cooking venison:

1. Deer roasts must be cooked slowly and by some steam method similar to those used in preparing rump roasts. You can use aluminum foil, Dutch ovens, oven cooking bags, crockpots or pressure cookers.

2. Steaks, chops and liver should be cooked quickly and never past medium rare.

### Menu:

Dutch Oven Venison Roast

Dusty Potatoes

Broccoli With Orange Sauce

Cranberry Ring Mold

Mincemeat Cake

Hard Sauce

Dutch Oven Venison Roast

6 strips bacon

1 medium to large venison roast

Several small slivers of garlic

Browning sauce

Salt and pepper

Flour

1 can (10 3/4 ounces) golden mushroom soup

1/2 can water

1 medium onion

1 can (4 ounces) mushrooms, drained

Cook bacon until crisp in large frying pan. Remove bacon, crush and set aside. Leave bacon fat in pan. Stick roast with knife and inset small slivers of garlic. Coat roast with browning sauce, and salt and pepper it before lightly dusting with flour. Heat bacon fat and sear roast on all sides until thoroughly browned. Then set it aside for a moment. Meanwhile in Dutch oven or other deep cooking pot, mix your can of mushroom soup with 1/2 can of water. Remove enough rings

from onion to cover roast, separate them and set aside. Dice remainder of onion and add to mushroom soup; heat and add salt and pepper to taste. Color this mixture slightly with browning sauce. At this point place a rack in the bottom of your Dutch oven and place roast on the rack. Secure onion rings atop roast with wooden toothpicks. Sprinkle crushed bacon over top of roast and do the same with mushrooms. Finally, cover and cook very slowly for about 3 hours or until completely done.

### Dusty Potatoes

3/4 cup dry bread crumbs  
1 teaspoon nutmeg  
1/2 teaspoon salt

1/4 teaspoon pepper

4 medium potatoes, pared, cut into quarters

1/4 cup butter, melted

Combine bread crumbs, nutmeg, salt and pepper. Dip potatoes in melted butter and then roll in bread crumb mixture. Place in a greased, shallow pan. Bake in a 350 degree oven for about 1 hour or until potatoes are brown and crisp. Makes 4 servings.

### Broccoli With Orange Sauce

1 bunch fresh broccoli

2 tablespoons butter or margarine

2 tablespoons flour

1/2 cup orange juice

1/2 cup dairy sour cream

1/4 teaspoon salt

1/2 teaspoon grated orange rind

1/4 teaspoon dried thyme leaves

Wash broccoli and remove large leaves and tough part of stalks. Cut into individual spears. Place in large saucepan with 1/2-inch boiling water. Cover; simmer 10 to 12 minutes, until broccoli is crisp-tender. Meanwhile, melt butter in small saucepan. Remove from heat; blend in flour until smooth. Gradually stir in remaining ingredients and cook over low heat, stirring constantly, until mixture thickens. Drain broccoli well and serve with sauce. Makes 4 servings.

### Cranberry Ring Mold

12 ounces (3 cups) fresh cranberries, coarsely chopped

3/4 cup sugar

1 envelope unflavored gelatin

3/4 cup apple juice

1 apple, peeled and chopped

2 stalks celery, chopped

1/4 cup pecans, chopped

Mix cranberries and sugar and let sit for 15 minutes. Sprinkle gelatin over apple juice and let soften for 5 minutes. Then on low heat, let gelatin dissolve. Mix all ingredients together and pour into a lightly oiled 4-cup mold. Makes 8 to 10 servings.

### Mincemeat Cake

1 cup brown sugar

1/2 cup margarine or soft shortening

2 cups all purpose flour

1 jar (16 ounces) mincemeat

1 cup dates, chopped

1 cup nuts, chopped

1 tablespoon soda

1 tablespoon hot water

1 teaspoon vanilla

2 egg yolks

2 egg whites, stiffly beaten

Preheat oven to 300 degrees. Cream sugar and shortening until light and fluffy. Mix 1/2 cup flour with mincemeat, dates and nuts. Dissolve soda in hot water. Combine all ingredients except egg whites and blend well. Fold in stiffly beaten egg whites and spoon into a greased, paper-lined 9 x 5 x 3-inch loaf pan. Bake 1 1/2 to 2 hours or until cake tests done. Makes 16 slices. Serve with Hard Sauce.

### Hard Sauce

1/3 cup butter or margarine, room temperature

1 tablespoon bourbon or brandy

1 to 1 1/2 cups confectioners sugar

Pinch of salt

Work the butter with a spoon until light and creamy. Add bourbon and mix with butter. Add sugar gradually until light and fluffy. Chill until time to serve on slices of Mincemeat Cake.

# November Journal

## Letters

Last year as every year for about the past 40 years, I purchased a hunting and fishing license. It cost \$12.00 and the big game stamp the same. The fishing license was \$12.00 and the national forest stamp and county damage stamp were extra. I consider this money well spent and when you multiply this by the thousands of outdoorsmen in Virginia it adds up to a thriving business. Some years I am successful in bagging a deer or some small game and some years I'm not. But either way I eat everything that I catch or shoot. I don't measure the success of the hunt or fishing trip by what goes into the game bag. The cool crisp air on a frosty morning, the baying of the hounds, the whir of a covey of quail, and the smell of Hoppe's No. 9 or burned gunpowder is well worth the cost of the license to me.

Lately I had a person ask me, "How could you shoot a beautiful deer or a little rabbit?" Yet, when I asked them if they ever ate hamburger, steak or veal, or were a vegetarian, they could not make the connection. They seemed to think that all meat came wrapped in plastic and was never alive or breathing. I just can't understand this attitude because it usually pictures the hunter as some type of murderer with absolutely no concern for the environment, when just the opposite is true. We are not only concerned about the environment but our dollars in license fees, etc. show that we are putting our money where our mouth is and doing something about it. The destruction of natural habitat does much more damage to our wildlife population than is ever done by sportsmen. Wildlife is a renewable resource, but once the pond is drained or the field is built upon, there is no place for the ducks or rabbits to go. I hunted for years on the Mennonite farms where some of our largest housing projects in Virginia Beach now stand. All of our

wetlands are being drained, excavated and concreted, leaving us nothing but concrete and traffic jams. We are always told that business and profits have priority over the environment, and that toxic rain, acid waste, and a cesspool in Back Bay are necessary evils we must live with. When we speak out against these evils, we are labelled as some sort of radical extremists, who go around shooting at road signs and telephone poles and have no touch with reality. Most of my generation has given up, but I just hate to see our children inherit a legacy of cocaine and concrete, sewage spills and supermarkets, toxic waste and traffic jams. I would also like everyone to realize that the thousands of miles of National Forest, the many trout that are released, the game management that has provided us with an abundance of deer and turkey are all supported by licenses and fees paid for by all of the hunters and fishermen of Virginia.

Walter Vargo  
Virginia Beach

nest. We used to travel vast areas at night mapping the "peenting grounds" and comparing their locations from year to year. Unfortunately we didn't have the little radio transmitters the workers of today are blessed with. We did have the hard bottoms required to ride the hoods of jeeps, however.

Scott W. Little, M.D.  
Roanoke



Photo by Lee Walker.

## Nongame Belt Buckles Available

Get your free pewter belt buckle featuring the nongame and endangered species program logo of a cardinal in a dogwood with a contribution of \$50.00 or more to the Virginia's Non-game and Endangered Species Program. Order yours now while supplies last by sending your contribution to: Virginia Department of Game and Inland Fisheries, P.O. Box 11104, Richmond, VA 23230-1104. □

Buhlman and Tango's "Tracking the Timberdoodle" (Sept. 89) was an outstanding article.

In 1952 when I was an Ecologist with the Canadian Wildlife Service, one of my assignments was to join the group headed by Dr. Mandell from the University of Maine and survey the spring "singing grounds" near St. John and Fredericton in New Brunswick. We made a movie on this for the National Wildlife Federation.

The elusive little fellows present the biologist with an unusually difficult time in spotting them in the woods. When nesting they apparently give off no scent, as the hunting dogs we used were completely unable to flush them unless they accidentally stepped on a

## Support Sea Turtles—Buy A T-Shirt

The College of William and Mary's Virginia Institute of Marine Science (VIMS) is selling two kinds of 100 percent cotton sea turtle T-shirts to support the research and educational efforts of the Institute. A newly-arrived T-shirt is available in seafoam green with a loggerhead sea turtle hatchlings design. Also available is a swimming green turtle design on a background of peach or white. Both t-shirts are available in adult sizes M, L, XL for \$12.90 each (which includes tax, postage and handling). Specify design, color and size, and send your check or money order to VIMS, Aquarium Gift Shop, Gloucester Point, VA 23062. Please allow 6-8 weeks for delivery. No refunds or returns.

## Game Department Biologist Honored

Robert Duncan, assistant chief of the Wildlife Division for the Virginia Department of Game and Inland Fisheries received the 1989 Virginia Wildlife Federation Wildlife Conservationist of the Year award. Bob has been a leader in the wildlife management field in the state, particularly in deer management and research. We are all proud to be working with him. Congratulations! □

VIMS loggerhead sea turtle hatchlings T-shirt; photo by Roy Drinner.



VIMS swimming green turtle T-shirt; photo by Roy Drinner.



# Virginia's Wildlife

Bill Jones lifted the wet paper towel covering the red 16-ounce plastic cup. "This one's ready to go," he said softly. There, resting on a wet paper towel, halfway out of its eggshell, was the newborn. The eggtooth on its beak was still visible, and the dark green shell on its back had the three unmistakable aerodynamic ridges designed to help it glide through the oceans with minimum effort. Bill Jones lifted the newly-hatched loggerhead sea turtle gently from its artificial nest. Tiny flippers waved in the air. It was the form and function of delicate perfection.

"This guy has a 100 to 150-mile swim to make in four days," said Bill, gazing down at the newborn sea turtle in the palm of his hand. "He's got a yolk reserve of two to four days, and he needs to reach the Gulf Stream and settle into sargassum weed before that reserve runs out. If he gets there without being eaten by a shark or a gull or a bluefish, he'll be lucky. Once he's there, he'll spend the next five to seven years eating sargassum and the invertebrates living in the stuff."

It's enough to make you shake your head in wonder. We humans talk of courage and perseverance, but these are inadequate words to describe the struggle this tiny, flipper-waving baby will make to survive.

For millions of years before man, tiny loggerheads scurried along the sand toward their baptismal journey, hundreds of them together on a special night when the winds are cool, 60 to 61 days after their mother heaved herself on shore, crawled along the beach and dug a nest for her young. Most of these tiny, intrepid swimmers never make it. Less than one percent of them survive to adulthood, which means only one or two of the 200 hatchlings making their first heroic swim off Virginia's beaches will see 25 years of seasons in the sea. Some will be picked off by gulls or bluefish or sharks on their struggle to reach the Gulf Stream. As the years pass and they grow to several hundred pounds, others will become

## The Loggerhead Turtle

by  
Virginia Shepherd  
photo by  
Lynda Richardson

the food that keep tiger shark's alive, their shells sliced through with the sharks rows of teeth specially adapted to dine on turtles.

Still, they have survived since the time of dinosaurs, and the miracle of their journey lives on—but shakily now. We are the predators threatening the lives of those tiny loggerheads scrambling down the beach now, not the screaming gulls overhead or the tiger sharks with their monstrous teeth. With our takeover of nesting areas with beach houses, with our oil dumping that fouls their precious sargassum, with our pollution of the Chesapeake Bay, the most important nursery area for sea turtles once they reach seven years old, and with our senseless killing of them with our fishing nets—we are ending their sea journeys.

What a sobering thought that is to dwell upon as a black-eyed loggerhead still half-buried inside his eggshell returns your gaze from Bill Jones' hand. But, that's why the William and Mary graduate student is spending his summer at Back Bay National Wildlife Refuge (BBNWR) and False Cape State Park, going without sleep most nights to monitor the nests of the endangered sea turtles he has moved to a safer place on the beach, a place where the artificial sand dunes man pushed up on the beach in the 1930's won't hinder the incubation of the precious eggs. "If sea water gets into a nest," says Bill, "the eggs shrivel up like prunes and you lose them. And on a beach like this," he says waving his

arm across the high dunes and narrow beach we're standing on, "it's almost certain we'd lose the nests unless we moved them." Moving each nest beyond the dune line so that the eggs are safe from the egg-shriveling tides, Bill also puts a predator-proof cage around each nest, to keep them safe, mostly from ghost crabs and raccoons.

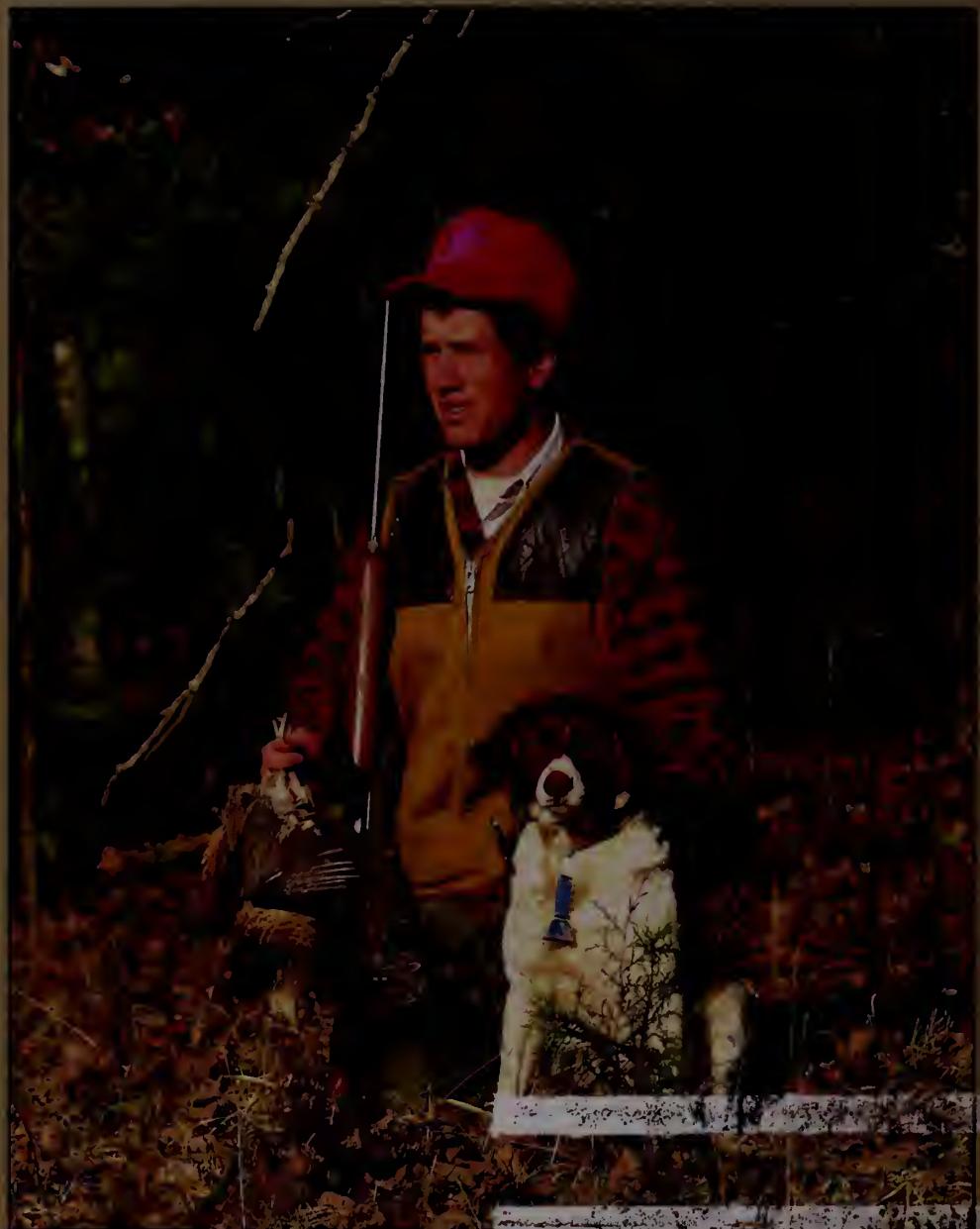
Beside playing midwife to thousands of eggs this summer in the largest nesting season yet with seven nests being laid on the BBNWR and False Cape, Bill is looking at the sex ratios of the hatchlings. Sex is determined in turtles by the temperature of the surrounding environment. But when you talk about exactly what temperature the nest must be in order for the hatchlings to turn into a male or female, the truth gets fuzzy. Generally, nest temperatures of 85 degrees and below will produce males, and those above 88 degrees females. But what happens between 86 and 87 degrees?

About 90 percent of the hatchlings we have seen in Virginia are males, while 90 percent of those seen on the east coast of Florida (where the majority of loggerheads nest) are female. The most intriguing theory these days is that because of the cooler northern temperatures, Virginia's nesting population may be supplying the males for the entire loggerhead population. Bill is hoping to help solve this mystery with his work on the Virginia nests.

Virginia's Nongame and Endangered Species Program is funding Bill's work, along with the College of William and Mary's Virginia Institute of Marine Science. But, the program doesn't run without money. Please don't forget those tiny turtles when you fill out your state income tax forms this coming year. Check off a contribution to the Nongame and Endangered Species Fund as part of your refund. Or use the gray card in this magazine to make a direct contribution. The scrambling loggerhead newborns can work the miracle of a 150-mile sea journey, but it's up to us to help them make it the rest of the way. □



# Make it a lifetime sport—



## Buy a lifetime hunting or fishing license

You can now purchase a lifetime hunting or fishing license from the Virginia Department of Game and Inland Fisheries for as little as \$250 apiece. Or, buy them both for \$500. It's a great deal, so buy yours now! Contact the Virginia Department of Game and Inland Fisheries, P.O. Box 11104, Richmond, VA 23230-1104 or call 1-800-252-7717 for details.